

XL.—Notes on *Myriosteon Higginsii*.

By Dr. J. E. GRAY, F.R.S.

ON the 12th of April 1864, I described, at the Zoological Society, a new form of animal under the name of *Myriosteon Higginsii*, probably indicating a new group of Echinodermata. (See Proc. Zool. Soc. 1864, p. 164.)

The specimen described had been generally regarded as the tail of a Ray, and some considered it a shell of a gigantic Foraminifer or the coral of a Polyzoan; but I was induced to believe, on account of the various pores and perforations on its surface, that it indicated a new group of radiated animals allied to *Asterias*.

I was satisfied that it could not be the tail of a Ray; for that consists of vertebræ covered with muscle, which is itself protected by a skin; whilst the specimen under examination is a hollow, elongated, compressed, rigid, bony cone, covered with hard concretions, and not at all flexible, or capable of movement like the tail of a fish.

I then stated that I did not believe it was "a part of any vertebrated animal." This is the part of my communication I wish to correct.

Having been requested by my friend Dr. E. Perceval Wright to allow him to examine a fragment under the microscope, when it was cut off I was much struck with the great similarity of the inner surface of the tube and the calcareous granulation to bone; and on consideration, I am now inclined to believe that it is part of a fish, and most probably, as they are the only ones which have a granulated skin, part of a cartilaginous fish; but the external surface of the tube is much harder and bone-like than the skeletons of these animals: it is probably an appendage of the head, like the beak of a sawfish.

On showing it to my friend Mr. Carter, he stated that he had found a somewhat similar specimen on the coast of Arabia, and that he thinks it was attached to the head of a kind of Ray. Unfortunately, he does not recollect to whom he gave his specimen, but will search for the description in his journal on his return home; and he believes it to be a part of the nasal bones.

I may observe it differs from the saw of the sawfish in being of a harder substance. Unfortunately, the state of my eyes, ever since the accident which occurred to them during the fire at the bookbinders of the Museum, has not allowed me to examine it under a microscope; but I have furnished Prof. Kölliker, Dr. Günther, Dr. Perceval Wright, and Mr. Carter

with fragments of it, which they have undertaken to examine; and I hope one or more of them will publish the results of their examination.

The fish of which it forms a part is at present unknown to naturalists; and therefore the name of *Myriosteon Higginsii* may be retained.

Since the above was written, Prof. Kölliker and Dr. Günther have sent me a preparation of the specimen mounted as a slide in Canada balsam; and they have no doubt it is part of a cartilaginous fish. They have now decided that it is one of the three or five bony tubes which strengthen and support the beak of the sawfish (*Pristis*), and thus confirm Mr. Carter's account; but how these tubes became so completely separated from each other and from the other bones of the beak is difficult to imagine, and shows the great power of the sun in tropical regions.

British Museum, April 7, 1870.

XLI.—*Researches on the Freshwater Crustacea of Belgium.*

(Second and Third Parts.) By FÉLIX PLATEAU*.

In the present day we have witnessed the appearance of many works on the freshwater Crustacea. In England especially we may cite the researches of Messrs. Baird, Lubbock, Brady, Norman, &c., a portion of which have been published in this journal. After these important memoirs and those relating to the same subject which have appeared in Germany, Sweden, and elsewhere, nothing remained for me, so to speak, but to glean the details which have been neglected by preceding carcinologists.

Genus *Daphnia*.—It seemed to me that it would be useful to make a complete study of the dermal skeleton of the *Daphnie*, which has hitherto been very imperfectly known; I have endeavoured to apply to it the methods of analysis of MM. Milne-Edwards, Spence Bate, and others, and to compare it as far as possible with the cutaneous envelope of the Decapoda.

The body includes three parts—the head, thorax, and abdomen. The portion of the valves and of the test which covers the apparent head answers to the *carapace* or *scapular ring* of the higher Crustacea; the *cardiac region* is represented by the triangular piece which covers the heart, and the *branchial region* by the valves.

* Mém. de l'Acad. Roy. de Belgique, Mém. des Savants étrangers, tome xxxv. Abstract communicated by the Author.